

0022



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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801-538-5340

801-359-3940 (Fax)

801-538-7223 (TDD)

November 1, 2000

TO:

~~REDACTED~~

THRU:

Daron R. Haddock, Permit Supervisor

100271

FROM:

Gregg A. Galecki, Reclamation Hydrologist

644

RE:

Abandonment of Equipment Underground, PacifiCorp, Trail Mountain Mine,

~~REDACTED~~

SUMMARY

On September 25, 2000 PacifiCorp submitted a letter to the Division indicating three longwall shields had been abandoned underground due to safety measures in the Trail Mountain Mine on Lease No UTU-64375. The fluids could not be drained because the shields could not be released in a safe manner. This Technical Memo assesses the impact to the hydrologic balance in the surrounding area due to the equipment abandonment.

TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: R645-301-731.300, 301-731.500, 301-747, 301-751

Analysis:

Groundwater Monitoring

A total of three longwall shields were abandoned approximately 1200 ft. west of the 5th West Main and 400 ft. north of the 4th Right bleeder. The drawing accompanying the letter

TECHNICAL MEMO

November 1, 2000

submitted September 25, 2000 incorrectly located the equipment between the 2nd and 3rd right bleeders. The permittee was contacted and he submitted a revised map on October 6, 2000 reflecting the proper location of the shields. The fluids remaining in the shields include a total of 6 gallons of Neat Oil contained within 120 gallons of emulsion fluid (95% water - 5% emulsion oil mixture).

Mining activities are concentrated in the Hiawatha coal seam which is located at the basal contact of the Blackhawk Formation and the upper Star Point Sandstone which strike N20°W and dip 3-5° west-southwest. Elevation of the equipment is approximately 6850 ft. with approximately 2200 ft of overlying sediments. Overlying sediments include the Castlegate sandstone, Price River Formation, and the North Horn Formation which all have limited groundwater potential and limit meteoric migration of water into the lower Blackhawk Formation. Elevations of springs in the vicinity are concentrated at 8700 ft. and 6900 ft, respectively. Spring 18-3-1 is the only spring located near the elevation of the equipment and it is located approximately 9600 ft. southwest. Plate 7-1 from the Trail Mountain MRP indicates the potentiometric surface of the Blackhawk-Starpoint aquifer is located at an elevation of 7080 ft. at the location of the shields and generally dips southwest. This indicates that eventually the equipment will be under water once the majority of the mine workings are saturated.

A Water Rights query indicates the only water users within 10,000 ft of the equipment are PacifiCorp and W.K.Minerals, Inc. The diversion points for both users are approximately 8,000 ft. northeast of the equipment, respectively. MSDS sheets for the Oil and Emulsion fluids are attached.

The U.S. Forest Service (USFS) is the Surface Management Agency for Mine Lease No. UTU-64375. Carter Reed, Manti-LaSal National Forest representative, was contacted by DOGM personnel on October 31, 2000 informing him of the equipment abandonment. He requested copies of the Divisions' notification of the abandonment and this technical analysis.

The impact of abandoning the steel associated with the three longwalls is insignificant compared to the other steel materials that must be left underground. Ferrous materials include steel roof bolts, steel wire ceiling mesh, and steel cans used in support pillars. These materials are not removed due to safety concerns in all underground coal mines.

Although hazardous materials including Neat oil and Emulsion fluids will eventually enter the hydrologic system, it will have an insignificant impact on the hydrologic balance in the area based on the following criteria:

- It will be a period of many years prior to the sediments being saturated to the 6850 ft. elevation.
- The combination of water chemistry, temperature, and lack of oxygen will impede the rate of oxidation of the metal.

- The combination of Specific gravity and dip of the geology will potentially carry any migration away from the surface waters.
- The total volume of the contaminants is so minute it will be diluted within a short distance.
- No municipal or domestic water uses exist within 8,000 ft. of the site.

Finding:

The abandonment of the three longwall shields underground meets minimum regulatory requirements.

RECOMMENDATION

The abandonment of the three longwall shields underground can be approved.

sm

Attachment: (MSDS Sheets)
(Shield Abandonment Map)
(PacifiCorp correspondence to BLM)
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FLUIDS:

- . EMULSION FLUID:
[@ 95:5 MIX RATIO; WATER TO OIL] - CENTURY
SOLCINIC 3B: ESTIMATED @ 40 GAL/SUPPORT X 151 SUPPORTS
= 6040 GAL. + 1000 GAL. (HOSE VOLUME) = 7040 GAL. ABANDON
(SEE ATTACHED MSDS SHEETS)
- . GEAR OIL:
[TG JAHNAL KPL-25 GEARCASE] - CENTURY POWERGEAR 320 OIL;
EST. @ 25 GAL. ABANDON *
(SEE ATTACHED MSDS SHEETS)
- . ATF FLUID:
[TG VOITH 650 FLUID COUPLING] - STD. HYD. ATF FLUID
EST. @ 15 GAL. ABANDON
(SEE ATTACHED MSDS SHEETS)
- . GREASE
[SPROCKETS, GEARBOX, ETC.] - STD. LITHIUM BASE LUBRICANT
(SEE ATTACHED MSDS SHEETS)

PACIFICORP
MATERIAL SAFETY DATA SHEET

07/27/95

PRODUCT: POWERGEAR SERIES

MANUFACTURER:
CENTURY LUBRICATING OILS
MSDS: 12187

GENERAL INFORMATION

PRODUCT: POWERGEAR SERIES

MANUFACTURER: CENTURY LUBRICANTS CO.
2140 S. 88TH ST.
KANSAS CITY, KS 66111-8701

EMERGENCY - CHEMTREC: 800-424-9300

BUSINESS: 800-800-6457

REVISION DATE: December 15, 1988 (AD HPC 9) 3612XX

A MEMBER OF THE FUCHS GROUP

UNK Means Unknown EST Means Estimated N.A. Means Not Applicable

HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS

Mineral Oil

Extreme pressure additive

TLV, TWA, PEL

TLV 5mg/M (Mist)

No TLV established

IARC, NTP, OSHA

Not listed

Not listed

PHYSICAL DATA

SOLUBILITY IN WATER (@ 20 C) : NEGLIGIBLE

VAPOR DENSITY (AIR) : >1.0

STRONG ACID: NO

STRONG BASE: NO

SPECIFIC GRAVITY (WATER=1) : <1.0

VAPOR PRESSURE (MM HG @ 20 C): <0.1

EVAPORATION RATE (ETHER = 1) : <0.01

PERCENT VOLATILE (BY WEIGHT) : ZERO

BOILING POINT (DEG F) : +600 F

MELTING POINT (DEG F) : N.A.

APPEARANCE AND ODOR : AMBER LIQUID, MILD PETROLEUM ODOR

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD): 450 F COC EST

FLAMMABILITY LIMITS: LEL - UNK UEL - UNK

EXTINGUISHING AGENTS: DRY CHEMICAL CO2 FOAM

SPECIAL FIRE FIGHTING PROCEDURES: AVOID BREATHING VAPORS. USE BREATHING APPARATUS IN CONFINED AREAS. COOL EXPOSED CONTAINERS WITH WATERSPRAY.

HAZARDOUS THERMAL DECOMPOSITION PRODUCT: CARBON MONOXIDE, CARBON DIOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS.

HEALTH HAZARD DATA & FIRST AID

PERMISSIBLE CONCENTRATIONS (AIR): NONE ESTABLISHED

ROUTE	EFFECT OF OVEREXPOSURE	EMERGENCY FIRST AID PROCEDURE
EYES	CAN CAUSE IRRITATION	FLUSH WITH WATER. SEE PHYSICIAN
SKIN	CAN CAUSE IRRITATION	WASH WITH SOAP & WATER. IF HIGH PRESSURE, GET IMMEDIATE MEDICAL ATTENTION.
INHALATION	MIST MAY CAUSE IRRITATION	REMOVE FROM CONTAMINATED AREA
INGESTION	NONE EXPECTED	

REACTIVITY DATA

STABILITY: STABLE

INCOMPATIBILITY: KEEP AWAY FROM STRONG OXIDIZERS

NOTE: HAZARDOUS POLYMERIZATION WILL NOT OCCUR

SPILL OR LEAK PROCEDURES

STEPS TO TAKE IN CASE OF SPILL: Add absorbent to spill area. Keep petroleum products out of sewers and waterways. Advise authorities if they do enter.

WASTE DISPOSAL: Dispose of at appropriate waste facility in accordance with regulations.

PRECAUTIONS IN STORAGE: Keep containers closed when not in use. Do not handle near heat, flames, sparks. Do not weld or heat empty containers.

SPECIAL PROTECTION INFORMATION

PRESPIRATION PROTECTION: None normally needed.

VENTILATION TYPE: General adequate. Use local mechanical to insure TLV's not surpassed where applicable.

SKIN PROTECTION: Chemically resistant gloves.

EYE PROTECTION: Goggles or faceshield.

OTHER PROTECTIVE MEASURES: None normally needed.

DISCLAIMER

The information contained herein is based on data considered accurate. However, no warranty, expressed or implied, is given regarding the accuracy of these data or the results to be obtained from the use thereof.

CENTURY LUBRICANTS CO.

MATERIAL
SAFETY
DATA
SHEET

MATERIAL SAFETY DATA SHEET

PRODUCT: SOLCENIC 3B EMULSION
MADE WITH DEIONIZED WATER

SECTION I

MANUFACTURER : CENTURY LUBRICATING OILS, INC. TELEPHONE : 800-255-4107
ADDRESS : 2140 S. 88TH ST. CHEM TREC : 800-424-9300
KANSAS CITY, KS 66111-8701
REVISION DATE: 1/25/93 HPC - 11 DOC:114 PREPARED BY : M.D. HART

SECTION II CHEMICAL AND PHYSICAL PROPERTIES

SOLUBILITY IN WATER (@ 20 C): VERY VAPOR DENSITY (AIR): > 1.0
SPECIFIC GRAVITY (WATER=1): < 1.0 STRONG ACID : NO
VAPOR PRESSURE (mmHg @ 20 C): > 1.0 STRONG BASE : NO
EVAPORATION RATE (ether = 1): < 0.01 BOILING POINT (DEG F): 212 F
PERCENT VOLATILE (by weight): 98 MELTING POINT (DEG F): N.A.

APPEARANCE AND ODOR : CLEAR LIQUID, BLAND ODOR

SECTION III REACTIVITY DATA

STABILITY : STABLE INCOMPATIBILITY : KEEP AWAY FROM STRONG OXIDIZERS
NOTE : HAZARDOUS POLYMERIZATION WILL NOT OCCUR

SECTION IV FIRE AND EXPLOSION DATA

FLASH POINT (METHOD) : N/A FLAMMABLE LIMITS-LEL: UNK UEL: UNK
EXTINGUISHING AGENTS : DRYCHEMICAL(X) CO2 (X) WATERSPRAY (X) FOAM (X)
SPECIAL FIRE FIGHTING: Avoid breathing vapors. Use breathing apparatus in
PROCEDURES confined areas. Cool exposed containers with waterspray
HAZARDOUS THERMAL : Carbon monoxide, carbon dioxide and unidentified
DECOMPOSITION PRODUCT organic compounds.

SECTION V PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO TAKE IN : Add absorbent to spill area. Keep petroleum products out of
CASE OF SPILL sewers and waterways. Advise authorities if they do enter.
WASTE DISPOSAL : Dispose of at appropriate waste facility in accordance with
METHOD regulations.
PRECAUTIONS IN : Keep containers closed when not in use. Do not handle near
STORAGE heat, flames, sparks. Do not weld or heat empty containers.

SECTION VI

HEALTH HAZARD DATA

PERMISSIBLE CONCENTRATIONS (AIR) : None established

ROUTE	EFFECT OF OVEREXPOSURE	EMERGENCY FIRST AID PROCEDURE
EYES	NONE EXPECTED	FLUSH WITH WATER. SEE PHYSICIAN
SKIN	PROLONGED OR REPEATED CONTACT MAY CAUSE MILD IRRITATION	WASH WITH SOAP AND WATER. IF HIGH PRESSURE, GET IMMEDIATE MEDICAL ATTENTION.
INHALATION	MIST MAY CAUSE IRRITATION	REMOVE FROM CONTAMINATED AREA
INGESTION	NONE EXPECTED	
CHRONIC	NONE EXPECTED WITH NORMAL EXPOSURE	

HAZARDOUS INGREDIENTS	TLV, TWA, PEL	IARC, NTP, OSHA
MINERAL OIL	TLV 5mg/M (MIST)	NOT LISTED
ORGANIC ACID SALT	NONE ESTABLISHED	NTP LISTED

SECTION VII

CONTROL MEASURES

RESPIRATION PROTECTION : NONE NORMALLY NEEDED

VENTILATION TYPE : GENERAL ADEQUATE. USE LOCAL MECHANICAL TO INSURE TLV'S
NOT SURPASSED WHERE APPLICABLE.

SKIN PROTECTION : CHEMICALLY RESISTANT EYE PROTECTION : GOGGLES OR FACESHIELD
DESIRABLE DESIRABLE

OTHER PROTECTIVE
MEASURES : NONE NORMALLY NEEDED

SECTION VIII

MISCELLANEOUS

UNK MEANS UNKNOWN
EST MEANS ESTIMATED
N.A. MEANS NOT APPLICABLE

The hazard evaluation of this Century product is based on a formulation using deionized water.

The information contained herein is based on data considered accurate. However, no warranty, expressed or implied, is given regarding the accuracy of these data or the results to be obtained from the use thereof.

CENTURY LUBRICANTS CO.

MATERIAL
SAFETY
DATA
SHEET

MATERIAL SAFETY DATA SHEET

PRODUCT: SOLCENIC 3B

SECTION I

MANUFACTURER : CENTURY LUBRICATING OILS, INC. TELEPHONE : 800-255-4107
ADDRESS : 2140 S. 88TH ST. CHEM TREC : 800-424-9300
KANSAS CITY, KS 66111-8701
REVISION DATE: 6/1/90 (442350-AA) DOC:113 PREPARED BY : M.D. HART

SECTION II CHEMICAL AND PHYSICAL PROPERTIES

SOLUBILITY IN WATER (@ 20 C):	VERY	VAPOR DENSITY (AIR):	> 1.0
SPECIFIC GRAVITY (WATER=1):	> 1.0	STRONG ACID	: NO
VAPOR PRESSURE (mmHg @ 20 C):	< 0.1	STRONG BASE	: NO
EVAPORATION RATE (ether = 1):	< 0.01	BOILING POINT (DEG F):	IBP 212 F
PERCENT VOLATILE (by weight):	> 61	MELTING POINT (DEG F):	N.A.

APPEARANCE AND ODOR : AMBER LIQUID, MILD PETROLEUM ODOR

SECTION III REACTIVITY DATA

STABILITY : STABLE INCOMPATIBILITY : KEEP AWAY FROM STRONG OXIDIZERS

NOTE : HAZARDOUS POLYMERIZATION WILL NOT OCCUR

SECTION IV FIRE AND EXPLOSION DATA

FLASH POINT (METHOD) : N.A. FLAMMABLE LIMITS-LEL: UNK UEL: UNK
EXTINGUISHING AGENTS : DRYCHEMICAL(X) CO2 (X) WATERSPRAY () FOAM (X)
SPECIAL FIRE FIGHTING: Avoid breathing vapors. Use breathing apparatus in
PROCEDURES confined areas. Cool exposed containers with waterspray
HAZARDOUS THERMAL : Carbon monoxide, carbon dioxide, nitrogen oxide and
DECOMPOSITION PRODUCT unidentified organic compounds.

SECTION V PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO TAKE IN : Add absorbent to spill area. Keep petroleum products out of
CASE OF SPILL sewers and waterways. Advise authorities if they do enter.
WASTE DISPOSAL : Dispose of at appropriate waste facility in accordance with
METHOD regulations.
PRECAUTIONS IN : Keep containers closed when not in use. Do not handle near
STORAGE heat, flames, sparks. Do not weld or heat empty containers.

SECTION VI

HEALTH HAZARD DATA

PERMISSIBLE CONCENTRATIONS (AIR) : None established for product

ROUTE	EFFECT OF OVEREXPOSURE	EMERGENCY FIRST AID PROCEDURE
EYES	MAY BE CORROSIVE	FLUSH WITH WATER. SEE PHYSICIAN
SKIN	MAY CAUSE IRRITATION AND ALLERGIC SENSITIZATION IN SOME INDIVIDUALS.	WASH WITH SOAP AND WATER. IF HIGH PRESSURE HAS CAUSED PENETRATION BENEATH SKIN SEEK IMMEDIATE MEDICAL ATTENTION.
INHALATION	MISTS CAN CAUSE IRRITATION	
INGESTION	MAYBE HARMFUL OR FATAL IF SWALLOWED CAUSING TREMORS, DIZZINESS, VOMITING AND NAUSEA.	IF CONSCIOUS, GIVE 2 GLASSES OF MILK. DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.
CHRONIC	NONE EXPECTED WITH NORMAL EXPOSURE	

HAZARDOUS INGREDIENTS	TLV, TWA, PEL	IARC, NTP, OSHA
TRIAZINE COMPOUND	NONE ESTABLISHED	NOT LISTED
MINERAL OIL	TLV 5mg/M (MIST)	NOT LISTED
ORGANIC ACID SALT	NONE ESTABLISHED	NTP LISTED
ORGANIC AMIDE	NONE ESTABLISHED	NOT LISTED
ALKYL AMINES	TWA 3 ppm 8-Hr	NOT LISTED
FATTY ACID	NONE ESTABLISHED	NOT LISTED

SECTION VII

CONTROL MEASURES

RESPIRATION PROTECTION : NONE NORMALLY NEEDED

VENTILATION TYPE : GENERAL ADEQUATE. USE LOCAL MECHANICAL TO INSURE TLV'S NOT SURPASSED WHERE APPLICABLE.

SKIN PROTECTION : CHEMICALLY RESISTANT GLOVES EYE PROTECTION : GLASSES WITH SHIELD, GOGGLES OR FACESHIELD

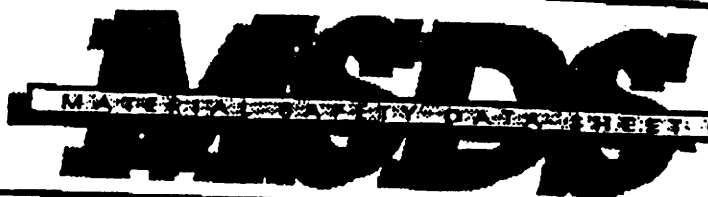
OTHER PROTECTIVE MEASURES : WASH HANDS BEFORE EATING OR SMOKING

SECTION VIII

MISCELLANEOUS

UNK MEANS UNKNOWN
EST MEANS ESTIMATED
N.A. MEANS NOT APPLICABLE

The information contained herein is based on data considered accurate. However, no warranty, expressed or implied, is given regarding the accuracy of these data or the results to be obtained from the use thereof.



GREP0298

Revised 25-JUN-1997

Printed 21-APR-1998

TACNA Rx RED MULTIPURPOSE GREASE, NO. 2

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"TACNA" is a registered trademark of Conoco.

Tradenames and Synonyms

9440 - Conoco Base Code

Company Identification

MANUFACTURER/DISTRIBUTOR

Conoco, Inc.
P.O. Box 2197
Houston, TX 77252

PHONE NUMBERS

Product Information

1-281-293-5550

Transport Emergency

CHEMTREC 1-800-424-9300

Medical Emergency

1-800-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material

	CAS Number	%
Highly-Refined Base Oils		80-100
Lithium soaps		5-20
*Zinc compound	68649-42-3	0-1
Proprietary additives		1-5

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

(Continued)

HAZARDS IDENTIFICATION

Potential Health Effects

#

Primary Route of Entry: Skin

The product, as with many petroleum products, may cause minor skin, eye, and lung irritation, but good hygienic practices can minimize these effects.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

Wipe off excess with towel. Wash skin thoroughly with soap and water. If irritation develops and persists, consult a physician.

If injected under the skin, necrosis could occur. See physician.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

High velocity injection under the skin can cause a bloodless puncture wound and result in necrosis. Immediate attention by a surgical specialist is recommended.

(Continued)

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point
Method

450 F (232 C) (Base Oil)
Cleveland Open Cup - COC.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

Water spray may spread fire.

Fire Fighting Instructions

Cool tank/container with water spray.

Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up

Recover undamaged and minimally contaminated material for reuse and reclamation. Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Wash contaminated clothing prior to reuse.

Handling (Physical Aspects)

Close container after each use. Do not pressurize, cut, weld, braze, solder, grind, or drill on or near full or empty container. Empty container retains residue (liquid and/or vapor) and may explode in heat of a fire.

Storage

Store below 120 F (49 C). Store in accordance with National Fire Protection Association recommendations. Store away from oxidizers. Store in a clean, dry place.

(Continued)

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls
Keep container tightly closed.

Normal ventilation.

Personal Protective Equipment
Respiratory Protection: None required except under unusual circumstances such as described under Fire Fighting Measures.

Protective Gloves: Should be worn when the potential exists for prolonged or repeated skin contact. NBR or neoprene recommended.

Eye/Face Protection: Safety glasses with side shields if splashing is probable.

Other Precautions: Avoid prolonged skin contact by practicing good personal hygiene and laundering contaminated clothing.

Exposure Guidelines

Exposure Limits

TACNA Rx RED MULTIPURPOSE GREASE, NO. 2	
PEL (OSHA)	None Established
TLV (ACGIH)	None Established

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	Not Applicable
Vapor Pressure	<0.01 mm Hg
Vapor Density	>1 (Air = 1)
Evaporation Rate	<1 (Butyl Acetate = 1)
Odor	Petroleum (mild).
Form	Semi-solid (Grease)
Color	Red
Specific Gravity	0.93 (Water=1.0)
Density	7.5 lb/gal

STABILITY AND REACTIVITY

Chemical Stability
Stable.

Conditions to Avoid
Heat, sparks, and flames.

Incompatibility with Other Materials
Incompatible with strong oxidizing materials, acids.

Decomposition
Normal combustion forms carbon dioxide; incomplete combustion may produce carbon monoxide.

Polymerization
Polymerization will not occur.

(Continued)

JUL 10 98 3:27 PM L 5 P 113 233 34 014000012533 7.06/00

TOXICOLOGICAL INFORMATION

Animal Data

Mouse skin painting studies have shown that highly solvent-refined petroleum distillates similar to ingredients in this product have not caused skin tumors.

Animal skin exposure studies show high concentrations of zinc organic phosphates cause testicular atrophy, but this effect appears related to stress from the chemical causing severe skin irritation. Low concentrations of the zinc component, as occurs in lubricant products, would not have caused testicular damage.

ECOLOGICAL INFORMATION

Ecotoxicological Information

No specific aquatic data available for this product.

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

Container Disposal

Empty drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All other containers should be disposed of in an environmentally safe manner.

TRANSPORTATION INFORMATION

Shipping Information

DOT

Not regulated.

ICAO/IMO

Not restricted.

Shipping Information -- Canada

This material is Not Regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

OSHA HAZARD DETERMINATION

This material is not known to be hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA/SUPERFUND

(Continued)

REGULATORY INFORMATION(Continued)

Not applicable; this material is covered by the CERCLA petroleum exclusion.

SARA, TITLE III, 302/304

This material is not known to contain extremely hazardous substances.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : No
Chronic : No
Fire : No
Reactivity : No
Pressure : No

SARA, TITLE III, 313

This material contains the following chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and is subject to toxic chemical release reporting requirements:

Toxic Chemical(s) Zinc Compound

TSCA

Material and/or components are listed in the TSCA Inventory of Chemical Substances (40 CFR 710).

RCRA

This material has been evaluated for RCRA characteristics and does not meet hazardous waste criteria if discarded in its purchased form. Because of product use, transformation, mixing, processing, etc., which may render the resulting material hazardous, it is the product user's responsibility to determine at the time of disposal whether the material meets RCRA hazardous waste criteria.

CLEAN WATER ACT

The material contains the following ingredient(s) which is considered hazardous if spilled into navigable waters and therefore reportable to the National Response Center (1-800-424-8802).

Ingredient(s)	Petroleum Hydrocarbons
Reportable Quantity	Film or sheen upon or discoloration of any water surface

State Regulations (U.S.)

CALIFORNIA "PROP 65"

The material contains ingredient(s) known to the State of California to cause cancer, birth defects, or other reproductive harm. Read and follow all label directions.

Ingredient	Arsenic	@ <0.01%
Ingredient	Cadmium	@ <0.01%
Ingredient	Ethyl acrylate	@ <0.01%

(Continued)

REGULATORY INFORMATION(Continued)

Ingredient Lead @ <0.01%

PENNSYLVANIA WORKER & COMMUNITY RIGHT TO KNOW ACT
This material may contain the following ingredient(s) subject to
the Pennsylvania Worker and Community Right to Know Hazardous
Substances List.

Ingredient Zinc Compound
Category Environmental Hazard

Canadian Regulations

This is not a WHMIS Controlled Product.

Transport/Medical Emergency Phone Number: 1-613-348-3616

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating
Health 0
Flammability 1
Reactivity 0

NPCA-HMIS Rating

Health 1
Flammability 1
Reactivity 0

Personal Protection rating to be supplied by user depending on use
conditions.

The data in this Material Safety Data Sheet relates only to the
specific material designated herein and does not relate to use in
combination with any other material or in any process.

Responsibility for MSDS : MSDS Coordinator
Address : Conoco Inc.
> : PO Box 2197
> : Houston, TX 77252
Telephone : 1-281-293-5550

Indicates updated section.

End of MSDS

CONOCO -- DEXRON II AND MERCON - HYDRAULIC FLUID,AUTOMATIC TP SMISSION http://siri.org/msds/h/q479/q444
MATERIAL SAFETY DATA SHEET
NSN: 9150006574959
Manufacturer's CAGE: 5R396
Part No. Indicator: A
Part Number/Trade Name: DEXRON II AND MERCON

=====

General Information

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Item Name: HYDRAULIC FLUID,AUTOMATIC TRANSMISSION
Company's Name: CONOCO INC
Company's P. O. Box: 2197
Company's City: HOUSTON
Company's State: TX
Company's Country: US
Company's Zip Code: 77252
Company's Emerg Ph #: 800-424-9300/441-3637
Company's Info Ph #: 713-293-5550
Distributor/Vendor # 1: AIM CHEMICALS INC (713-529-4251)
Distributor/Vendor # 1 Cage: 0AR58
Record No. For Safety Entry: 024
Tot Safety Entries This Stk#: 039
Status: SE
Date MSDS Prepared: 01APR89
Safety Data Review Date: 17JAN95
Supply Item Manager: CX
MSDS Preparer's Name: ENVIRO & OCCUP HEALTH SRV
Preparer's Company: CONOCO INC. (713-293-5550)
Preparer's St Or P. O. Box: (MSDS CODE:ATFC0039)
MSDS Serial Number: BWDXC
Specification Number: DEXRON II
Hazard Characteristic Code: N1
Unit Of Issue: CN
Unit Of Issue Container Qty: 5 GALLONS
Type Of Container: CAN
Net Unit Weight: 36.3 LBS

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Ingredients/Identity Information

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Proprietary: NO
Ingredient: PER MSDS:MATL NOT HAZ AS DEFINED BY OSHA HAZ COMMUN STD,
20CFR1910.1200.
Ingredient Sequence Number: 01
Percent: 100
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Other Recommended Limit: NONE RECOMMENDED

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Physical/Chemical Characteristics

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Appearance And Odor: CLEAR RED LIQUID, MILD PETROLEUM HYDROCARBON ODOR.
Boiling Point: 650F,343C
Vapor Density (Air=1): >1
Specific Gravity: 0.87
Evaporation Rate And Ref: NIL, REF=UNK
Solubility In Water: INSOLUBLE
Percent Volatiles By Volume: NIL
Autoignition Temperature: 650F

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Fire and Explosion Hazard Data

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Flash Point: 325F,163C
Flash Point Method: PMCC
Extinguishing Media: USE WATER SPRAY, DRY CHEMICAL, CO2, FOAM.
Special Fire Fighting Proc: WATER/FOAM MAY CAUSE FROTHING.USE WATER TO
KEEP FIRE-EXPO CNTNRS COOL.WATERSPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM
EXPOSURES.
Unusual Fire And Expl Hazrds: PROD OF COMBUST MAY CONTAIN CARBON MONOXIDE,

CARBON DIOXIDE & OTHER TOXIC MATLS.DO NOT ENTER ENCLOSED/CONFINED SPACE W/O
PROPER PORT EQPMT INCLUDING RESP PROT.

Reactivity Data

Stability: YES

Cond To Avoid (Stability): HEAT AND FLAME.

Materials To Avoid: STRONG OXIDIZING MATERIALS.

Hazardous Decomp Products: HAZ GASES/VAPORS PRODUCED ARE CARBON DIOXIDE.
INCOMPLETE COMBUSTION MAY PRODUCE CARBON MONOXIDE.

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): NOT APPLICABLE

Health Hazard Data

LD50-LC50 Mixture: NONE ESTABLISHED

Route Of Entry - Inhalation: NO

Route Of Entry - Skin: YES

Route Of Entry - Ingestion: NO

Health Haz Acute And Chronic: PRODUCT DOES NOT POSE SIGNIFICANT HEALTH HAZ
BUT AS WITH MANY PETROLEUM PRODUCTS POOR HYGIENIC PRACTICES OR INADEQUATE
ENGINEERING DESIGN THAT ALLOW PROLONGED/REPEATED EXPOSURE MAY CAUSE MINOR
SKIN IRRIT.

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: NO

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: PER MSDS:LISTED AS CARCINOGEN OR POTENTIAL
CARCINOGEN BY:NTP/IARC/OSHA:NO.

Signs/Symptoms Of Overexp: MOUSE SKIN PAINTING SUTDIES HAVE SHOWN THAT
HIGHLY SOLVENT-REFINED PETROLEUM DISTILLATES SIMILAR TO INGRED IN THIS
PRODUCT HAVE NOT CAUSED SKIN TUMORS.

Med Cond Aggravated By Exp: NONE SPECIFIED BY MFG.

Emergency/First Aid Proc: EYE:IMMED FLUSH W/PLENTY OF WATER FOR @LEAST
15MINS.CALL DR.SKIN:COMPOUND NOT LIKELY TO BE HAZ BY SKIN CONTACT BUT
CLEANSING SKIN AFT USE IS ADVISABLE.INHAL:NO SPECIFIC INTERVENTION IS
INDICATED AS COMPOUND NOT LIKELY TO BE HAZ BY INHAL.HOWEVER CONSULT DR IF
NECESSARY.INGEST:DO NOT INDUCE VOMIT.GIVE LG QUANT OF WATER.CALL DR.NOTE TO
DR:GASTRIC LAVAGE BY QUALIFIED PERSON DEPENDING ON AMT INGESTED.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: CONTAIN IMMED.RECOVER BY VACUUMING FOLLOWED
BY RECOVERING RESIDUAL FLUIDS W/ABSORBENT MATL.NON-RECOVERABLE PROD,
CONTAMIN SOIL/DEBRIS,OTHER MATL SHOULD BE PLACED IN PROPER CNTNR FOR
ULTIMATE DISPOSAL.AVOID WASHING,DRAINING,DIRECTING MATL TO STORM/SEW
Neutralizing Agent: NONE SPECIFIED BY MFG

Waste Disposal Method: RECYCLE AS MUCH OF RECOVERABLE PROD AS POSSIBLE.
TREAT/STORAGE/TRANSP/DISPOSAL MUST BE IAW APPLIABLE FED/STATE/PROVINCIAL/
LOC REGS.MATL CONTAINS PETROLEUM HYDROCARBON-CONSIDERED HAZ IF SPILLED IN
NAVIGABLE WATERS.RQ=FILM/SHEEN UPON/DISCOLOR OF H2O SUR

Precautions-Handling/Storing: HANDLE & STORE IN ACCORDANCE WITH NFPA
PROCEDURE FOR CLASS IIIB COMBUSTIBLE LIQUID.

Other Precautions: NORMAL PRECAUTIONS FOR HANDLING HOT, MOLTEN LIQUID OR
SOLUTIONS.

Control Measures

Respiratory Protection: NONE NORMALLY REQUIRED EXCEPT UNDER UNUSUAL
CIRCUMSTANCES SUCH AS DESCRIBED IN FIRE/EXPLOSION HAZARD DATA SECTION.

Ventilation: NORMAL SHOP VENTILATION.

Protective Gloves: RUBBER OR PVC GLOVES.

Eye Protection: SAFETY GLASSES W/SIDESHIELDS,CHEM GOGG

Other Protective Equipment: NONE SPECIFIED BY MFG.

Work Hygienic Practices: AVOID CONTACT W/EYES,SKIN,CLOTHING. WASH HANDS
AFTER HANDLING.

Transportation Data

Trans Data Review Date: 95017

DOT PSN Code: ZZZ
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
IMO PSN Code: ZZZ
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION
IATA PSN Code: ZZZ
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
AFI PSN Code: ZZZ
AFI Prop. Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION

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Disposal Data

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Label Data

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Label Required: YES
Technical Review Date: 17JAN95
Label Status: F
Common Name: DEXRON II AND MERCON
Chronic Hazard: NO
Signal Word: CAUTION!
Acute Health Hazard-Slight: X
Contact Hazard-Slight: X
Fire Hazard-None: X
Reactivity Hazard-None: X
Special Hazard Precautions: PROD DOES NOT POSE SIG HEALTH HAZ BUT AS W/
MANY PETROLEUM PROD POOR HYGIENIC PRACT/INADEQUATE ENGINEERING DESING THAT
ALLOW PROLONGED/REPEATED EXPOSURE MAY CAUSE MINOR SKIN IRRIT. HANDLE &
STORE IAW NFPA PROCEDURE FOR CLASS IIIB COMBUST LIQ. TARGET ORGANS:SKIN.
1ST AID:EYE:IMMED FLUSH W/LOTS OF WATER FOR @LEAST 15MINS.CALL DR.SKIN:CMPD
NOT LIKELY TO BE HAZ BY SKIN CONTACT BUT CLEANSING SKIN AFT USE IS
ADVISABLE.INHAL:NO SPECIFIC INTERVENTION IS INDICATED AS CMPD NOT LIKELY TO
BE HAZ BY INHAL.HOWEVER CONSULT DR IF NECESSARY.INGEST:DO NOT INDUCE VOMIT.
GIVE LG AMTS OF WATER.CALL DR.NOTE TO DR:GASTRIC LAVAGE BY QUAL PERSON
DEPENDING ON AMT INGESTED
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: CONOCO INC
Label P.O. Box: 2197
Label City: HOUSTON
Label State: TX
Label Zip Code: 77252
Label Country: US
Label Emergency Number: 800-424-9300/441-3637

UTU-64375

3rd Right

13 12 11 10 9 8 7 6 5 4 3 16 17 18 19 20 21 22 23 24 25 26 27

Abandoned Equipment

- (2) 1986 Hemscheidt Shields
- (1) 1998 Joy Shield
- ~40 Gallons each (Emulsion fluids)
- 95% Water
- 5% Emulsion
- 6 Gallons Neat Oil

5th LEFT

Shields
Abandonment
Area

4th Right

13 12 11 10 9 8 7 6 5 4 3 25 26 27

UTU-64375

CAD FILE NAME/DISK#: USERS\KJL\TRAIL\3R-ABANDONMENT.DWG

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

TRAIL MOUNTAIN MINE
3RD RIGHT LONGWALL
SHIELD ABANDONMENT

DRAWN BY: K. LARSEN

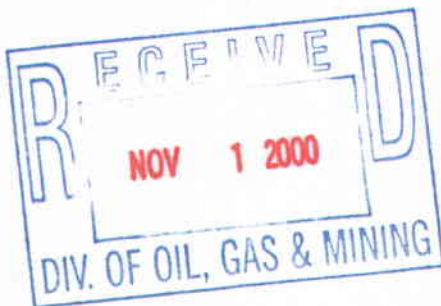
SCALE: 1"=200'

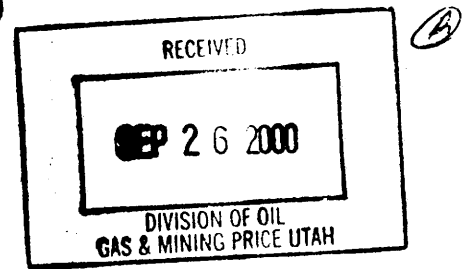
DATE: OCTOBER 6, 2000

DRAWING #:

SHEET 1 OF 1

REV.





September 25, 2000

Mr. Richard Manus
District Area Manager
Bureau of Land Management
Moab District, Price River Resource Area
125 South 600 West
Price, Utah 84501

Subject: **Abandonment of three longwall shields on the 3rd Right longwall extraction face, Trail Mountain Mine.**

Mr. Manus:

Pacificorp, by and through its wholly-owned subsidiaries, Interwest Mining Company as managing agent and Energy West Mining Company as mine operator hereby submits the following as notification of equipment that has been abandoned due to safety measures in the Trail Mountain Mine on Lease No. UTU-64375.

The longwall at Trail Mountain completed extraction of the 3rd Right panel to its approved extraction face at x-cut 8 on September 3, 2000. The extraction face was meshed and bolted with two noticeable high areas where the upper split and of carbonaceous siltstone had fallen above the normal roof horizon an additional 4-5'. These two areas were located from shield 55-63 and 106 to the tailgate. The new immediate top in these areas was a sandstone member. As the extraction of the shields began, the first 15 shields were extracted with little or no material caving behind the shields. This created additional, arching weight on the face and trailing shields and by the time the 112 was pulled, the trailing shields were very difficult to pull in. While working to pull the trailing shields up to prepare for extraction of shield 111, the area behind the trailing shields began "working" very hard and a shear tear in the sandstone member along the face opened up. Shortly after, a massive fall of the sandstone member, approximately 8-10' high from the tips of the shields to the face (10') and from shield 111-106 (27') occurred without warning. One injury was sustained with the falling rock breaking a leg of one of the supervisors who was stationed in the trailing shield area. This took place on September 6, 2000 at 11:00 am. MSHA was notified due to a roof fall that occurred above the anchorage horizon and they informed Energy West to begin

Huntington Office:
(435) 687-9821
Fax (435) 687-2695
Purchasing Fax (435) 687-9092

Deer Creek Mine:
(435) 687-2317
Fax (435) 687-2285

Trail Mountain Mine:
(435) 748-2140
Fax (435) 748-5125

cleanup of the area and that a representative would be on the property in the afternoon. No citations or orders were cited in connection with this incident.

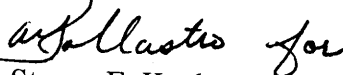
After the cleanup and some resecuring of the brow areas, the resultant height from 111-106 shield was ~25' high. The trailing shields were set at ~9' high with all the broken material up to the 25' level resting on them. After inspection of the area and in preparation to resume extraction of the shields, it was decided on September 7, for safety reasons to leave the two trailing shields and the first line shield (111) to act as a "breaker row" or bridge between the gob and face area behind the trailing shields and the current extraction face.

The extraction of the remaining shields were successful and completed on September 10, 2000.

In regards to the shields that were abandoned, all three shields were left in support of the roof extended to 8-10' and filled with emulsion fluid (95% water - 5% emulsion oil mixture) with a capacity of ~40 gallons each. The two trailing shields were a 1986 Hemshiedt model and the line shield was a 1998 Joy shield.

If there are any questions in regard to this matter, please call Carl Pollastro at 435-687-4701.

Sincerely,

A handwritten signature in cursive script, appearing to read "S. Kochevar for".

Steven E. Kochevar, P.E.

Sr. Planning and Development Engineer
Interwest Mining Company

Cc: William Malencik, UDOGM

UTU-64375

3rd Right

13

12

11

10

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27

Abandoned Equipment

- (2) 1986 Hemscheidt Shields
- (1) 1998 Joy Shield
- ~40 Gallons each (Emulsion fluids)
- 95% Water
- 5% Emulsion
- 6 Gallons Neat Oil

5th LEFT

Shields
Abandonment
Area

~ 9022 Elev.

4th Right
2nd Right

13

12

11

10

9

8

7

6

5

4

3

UTU-64375

CAD FILE NAME/DISK#: USERS\KJL\TRAIL\3R-ABANDONMENT.DWG

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

TRAIL MOUNTAIN MINE
3RD RIGHT LONGWALL
SHIELD ABANDONMENT

DRAWN BY: K. LARSEN

SCALE: 1" = 200'

DATE: OCTOBER 6, 2000

DRAWING #:

SHEET 1 OF 1

REV. _____



Strike N30°W
S6°W